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Towards SaaS (Software as a Service) Evaluation Model

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Agenda

- ☀ **IT Business Services Models**
- ☀ **SaaS - what is it & how is it different?**
- ☀ **Quality-based Model**
- ☀ **Future Directions and Summary**

An Important Definition (thanks to IBM sponsored white paper)* . . .

☀ **A service system is a dynamic configuration of resources (people, technology, organizations, and shared information) that creates and delivers value between the provider and customer through service.**

* “Succeeding through service innovation”, Cambridge Service Science, July 2008

One more definition (thanks to wikipedia) . . .

- **SaaS (Software-as-a-Service)** is a model of software deployment where an application is hosted as a service provided to customers across the Internet.
- By eliminating the need to install and run the application on the customer's own computer, SaaS alleviates the customer's burden of software maintenance, ongoing operation, and support. Conversely, customers relinquish control over software versions or changing requirements; moreover, costs to use the service become a continuous expense, rather than a single expense at time of purchase.

IT Business Service (Conceptual) Models

- ☀ **In-house services** - traditional, very challenging and hard to justify
- ☀ **Business framework** - growing in popularity, challenging, change organization to fit business model, not always easily delivered or accepted (e.g., ERP's and IBM Common Business Model)
- ☀ **Outsource services** - strategic, promising, brings a new set of problems (dealing with the service provider through contracts)
- ☀ **SaaS approach** - strategic, deployment of “best practices” in a business area, limited integration and recognition of special requirements of an organization being serviced

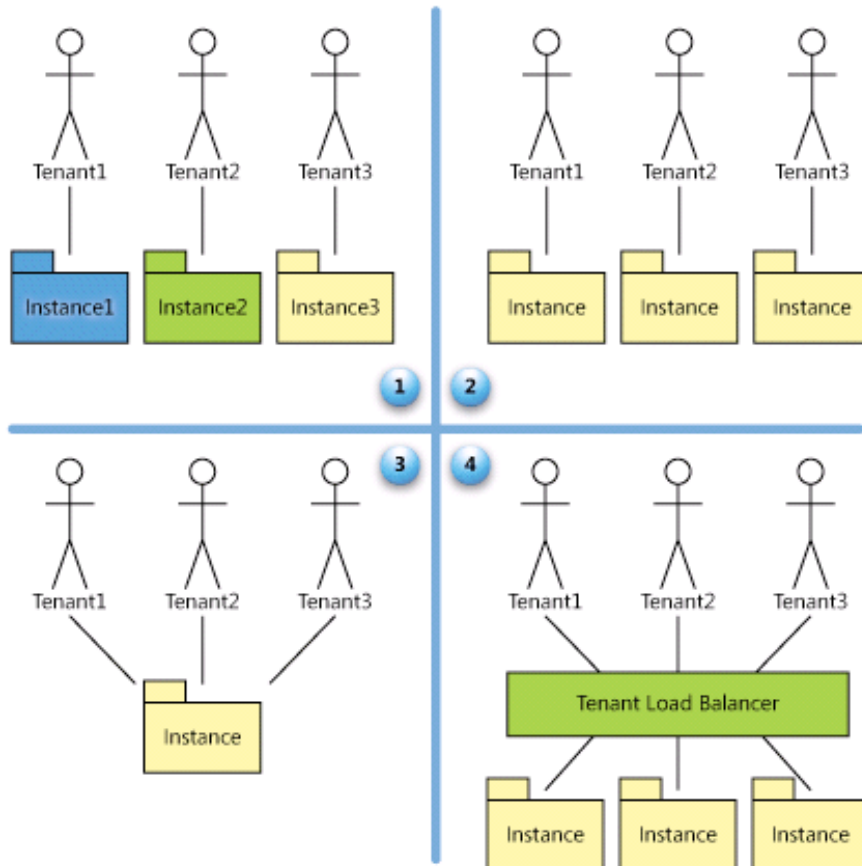
Existing SaaS Maturity Models

- ☀ **SaaS Simple Maturity Model by Microsoft Corporation (2006)**
- ☀ **Model by Forrester Research (2008)**
- ☀ **From SaaS Maturity Model to SaaS Evaluation Model**

SaaS Simple Maturity Model (Microsoft, 2006)

- ☀ **Model on Single Packaged Application**
- ☀ **Focused on SaaS Application Architecture**
- ☀ **Three Key Attributes of an Architecture:**
 - **Configurability**: Metadata used to configure the way the application behaves for customers
 - **Multi-tenant Efficiency**: Maximizing the sharing of resources across tenants
 - **Scalability**: Maximizing concurrency, resource efficiency

SaaS Simple Maturity Model: Four Levels



☀ **Level 1: Ad Hoc/Custom**

☀ **Level 2: Configurable**

☀ **Level 3: Configurable & Multi-Tenant-Efficient**

☀ **Level 4: Scalable, Configurable, Multi-Tenant-Efficient**

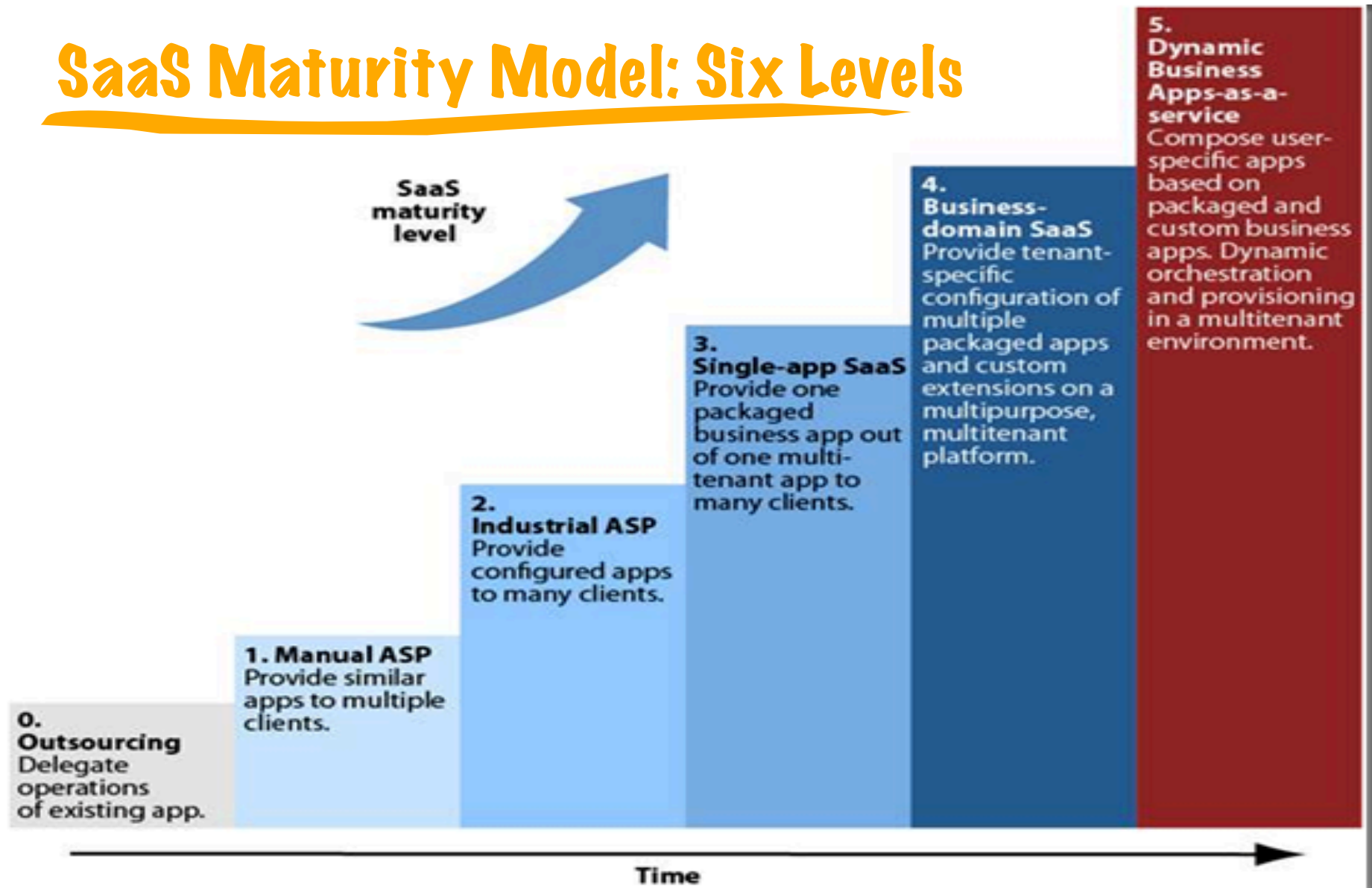
Summary

Maturity Level	Instances	Configurability	Multi-tenant Efficiency	Scalability
Level 1	Multiple different instances - ASP Model			
Level 2	Multiple identical instances- code sharing	X		
Level 3	Single instance - configurable metadata	X	X	
Level 4	Multiple identical instances with tenant load balancer	X	X	X

SaaS Maturity Model (Forrester, 2008)

- ☀ **Evolution Model on SaaS Applications: guidance on realistic strategy transformation for software vendors and services providers considering an SaaS business model**
- ☀ **Focused on SaaS Application Domain**

SaaS Maturity Model: Six Levels



Level 0: Outsourcing

- ☀ **A service provider operates a major application or a unique application landscape for a large enterprise customer**
- ☀ **The outsourcing company can't leverage the application for a second customer**
- ☀ **Does not really qualify as SaaS**

Level 1: Manual ASP

- ☀ **A service provider runs packaged applications for multiple midsize enterprises**
- ☀ **Each client usually has a dedicated server running its instance of the application and is able to customize the installation in the same way as self-hosted applications**
- ☀ **Target midsize companies**
- ☀ **Similar to level 1 (Ad-hoc/custom) of Microsoft's model**

Level 2: Industrial ASP

- ☀ **A service provider runs identical packaged applications with customer-specific configurations to many customers**
- ☀ **Cut the operating costs of applications to a minimum**
- ☀ **Usually applicable to small and midsize business customers**
- ☀ **Similar to level 2 (Configurable) of Microsoft's model**

Level 3: Single-app SaaS

- ✶ **An SaaS provider provides one packaged business application with Web-based user interface to many customers (e.g. Salesforce's initial CRM application)**
- ✶ **Customization is restricted to configuration**
- ✶ **Focus on small and midsize business customers**
- ✶ **Similar to level 3 (Configurable & Multi-Tenant-Efficient) of Microsoft's model**

Level 4: Business-domain SaaS

- ✶ **An advanced SaaS vendor provides not only a well-defined business application but also a platform for additional business logic**
- ✶ **Single application of level 3 complemented with third-party packaged SaaS solutions and custom extensions**
- ✶ **Satisfy the requirements of large enterprises**
- ✶ **Similar to level 4 of Microsoft's model, yet with extension of composition with other applications**

Level 5: Dynamic Business-domain Apps-as-a-Service

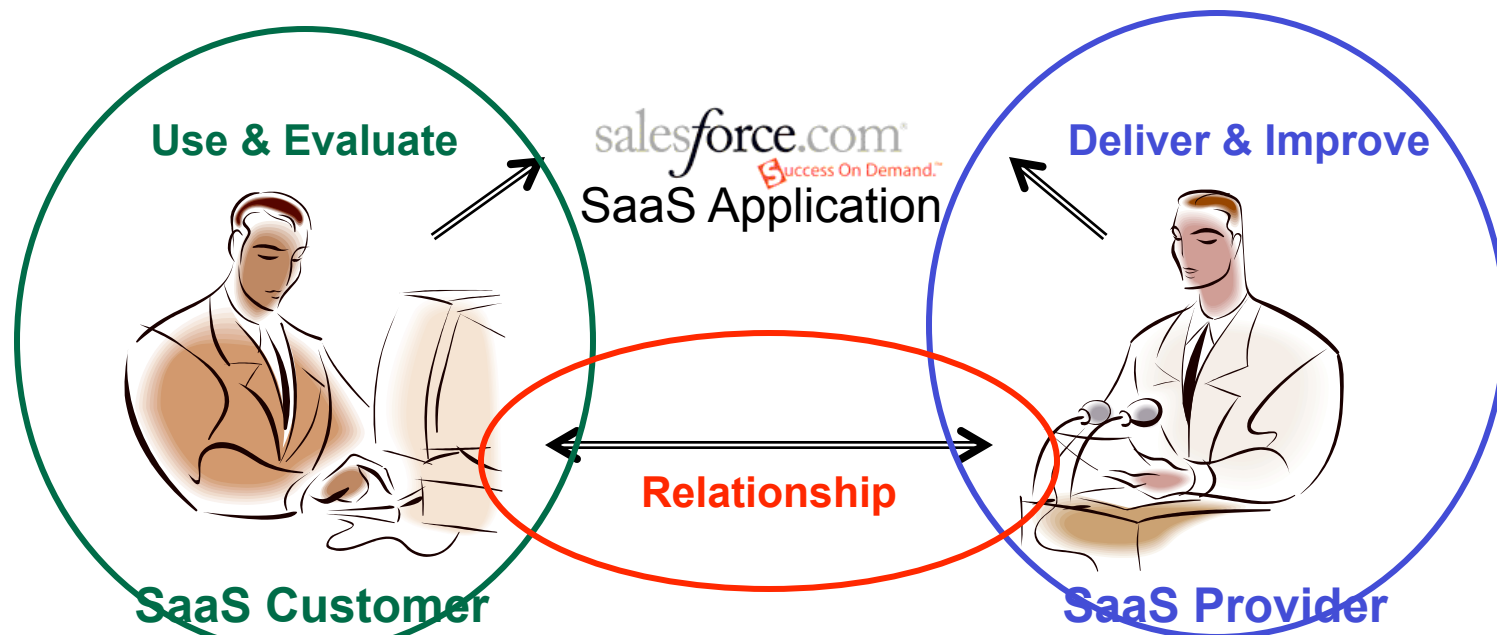
- ✶ **An advanced SaaS vendors coming provides a comprehensive application and integration platform on demand, which they will pre-populate with business applications or services**
- ✶ **New paradigm: design for people, build for change**
- ✶ **Composition of user-specific business applications on various levels in a multi-tenant environment**
- ✶ **The resulting process agility will attract everyone, including large enterprise customers**

Summary

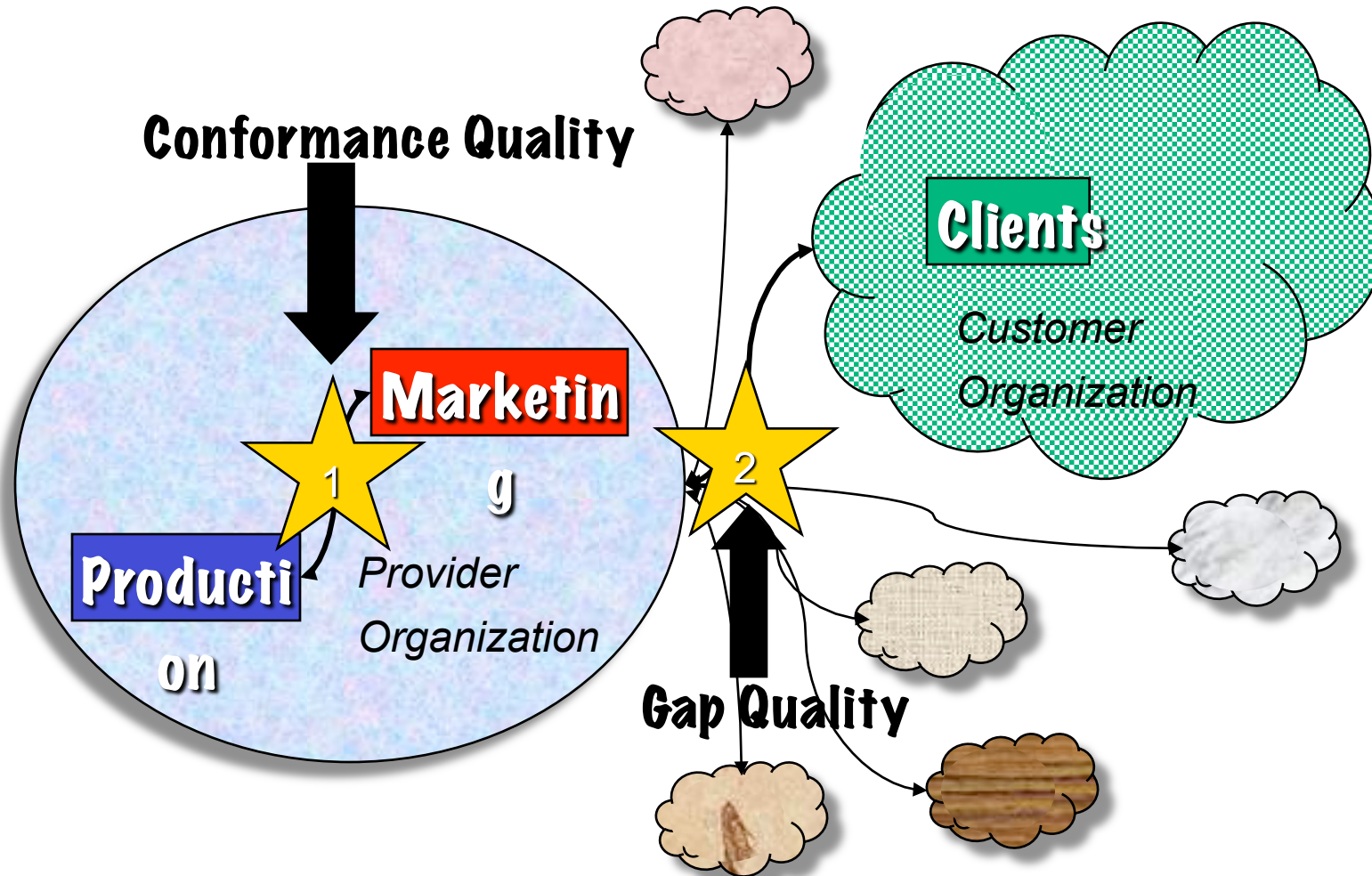
Maturity Level	Definition	Single/Multiple Application	Configurability	Multi-tenant Efficiency	Scalability	Equivalent Level in MS
Level 0	Outsourcing	Single app to one client				
Level 1	Manual ASP	Similar apps to multiple clients				Level 1
Level 2	Industrial ASP	Configured apps to many clients	X			Level 2
Level 3	Single-app SaaS	One packaged app to many clients	X	X		Level 3
Level 4	Business-domain SaaS	Configuration of multiple packaged apps and custom extension	X	X	X	Level 4 + custom extension
Level 5	Dynamic Business Apps-as-a-Service	Dynamic composition of user-specific apps based on packaged and custom business apps	X	X	X	Level 4 + dynamic composition

SaaS Evaluation Model - Starting Point

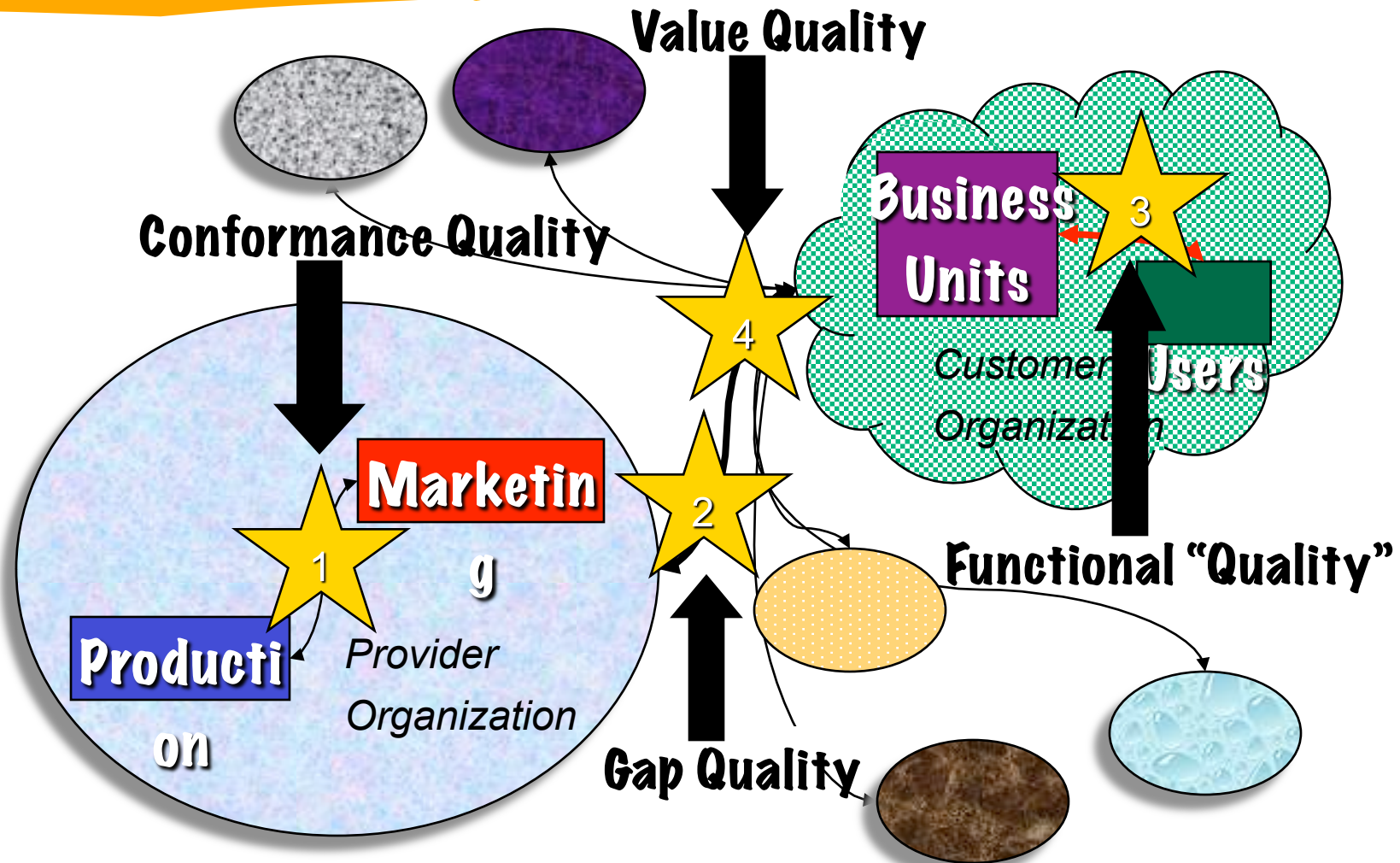
- ☀ Both perspectives of service provider and service customer are needed in SaaS maturity model (not just the service provider)
- ☀ Also need a focus on the business relationship between provider and customer



SaaS Relationships - Provider View



SaaS Relationships - Customer View



Relationship Management and Improvement

- 1. Internal Provider Organization Relationship - (Conformance Quality):
Marketing Maturity Models (see refs) dealing with business relationships between marketing and production in a producer organization to meet or succeed market performance expectations**
- 2. Provider to Customer Relationship - (Gap Quality): SERVQUAL/Gap Models used to determine and assess customer QoS requirements as a basis for service improvement**
- 3. Internal Customer Organization Relationship - (Functional “Quality”):
Functional Roadmaps, Business Modeling tools, frameworks and approaches**
- 4. Customer to Provider Relationship - (Value Quality) ROI, Business case analysis, risk-based analysis**

Maturity Levels of Business Relationship in SaaS

Maturity Level	Business Relationship	Service Customer	Service Provider	Quality Approaches
Level 1	Ad-hoc transaction	Functionality achieved	Static service delivery	
Level 2	Repeatable transaction	Reliability and other quality requirements guaranteed	Service delivered with stable capability	QoS requirements/ basic SLAs
Level 3	Configurable transaction	Monitoring on service quality	Service delivered with configurable capability	SLAs, Survey
Level 4	Long-term relationship	Continuous evaluation on service quality	Integrated delivery with customer extension	Survey, Balance Scorecard
Level 5	Strategic partnership	Governance of service (e.g. risk prevention)	Dynamic delivery with change management	ROI, Value analysis

Questions?!?

- ☀ **Discuss the factors (forces at play) that will shape SaaS solutions and markets in the future? (hints: What are SaaS shortcomings? What about IT infrastructure?)**
- ☀ **What, if any, is the role of business models in SaaS deployment?**
- ☀ **Is a SaaS Maturity Model useful?**

IBM's Component Business Model

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		Business competencies				
		Customers	Products/ services	Channels	Logistics	Business administration
Accountability level	Direct	Market strategy	Merchandise planning	Channel strategy	Network design	Corporate strategy
		Customer service strategy	Channel planning	Store design		Corporate planning
			Assortment planning	Real estate strategy	Warehouse design	Financial planning
	Control		Space planning	Internet design		Corporate governance
		Marketing strategy	Promotion planning	Catalog/call center design	Demand/flow planning	
			Product development			
			Sourcing			
	Execute	Campaign management	Product flow	Channel management	Inbound routing	Business performance management
			Planogramming	Labor management	Receipt scheduling	Treasury and risk management
			Allocation	Order management	Delivery scheduling	Legal and regulatory compliance
		Service management	Inventory mgt/DTB	Real estate, construction and facilities management	Carrier management	Inventory control
			Demand forecasting	Loss prevention		Cash and banking
			Price management			
			Content management			
			Vendor management			
		Customer service	Item management	Order management	Warehouse management	Financial accounting and reporting
		Customer communications	Product management	Inventory management	Transportation management	Indirect procurement
		Marketing	PO management	Merchandise management	Fleet management	HR administration
		Advertising	Vendor management	Price/sign management	Reverse logistics	IT systems and operations
		Public relations	Replenishment			
			Revenue/clearance management			

Source: IBM Business Consulting Services.

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